# ERSECTION OF IYSTIC STREET SHEET TOTAL SHEETS 1 53 6885 EX

## MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	1	53
	PROJECT FILE NO.	606885	

TITLE SHEET & INDEX

PS&E PLAN AND PROFILE OF

BIKEWAY CONNECTION AT INTERSECTION OF ROUTE 3 & ROUTE 60, MASSACHUSETTS AVENUE, PLEASANT STREET & MYSTIC STREET

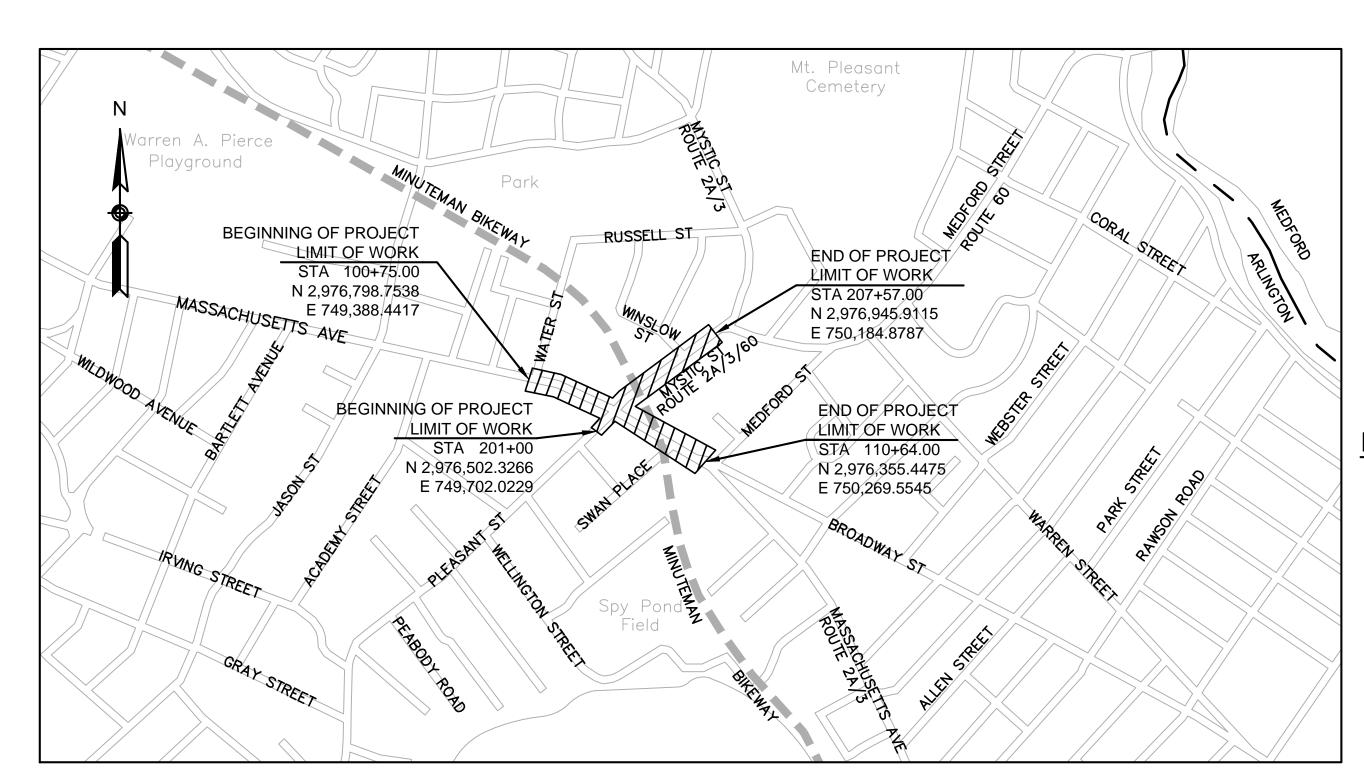
IN THE TOWN OF

### ARLINGTON MIDDLESEX COUNTY

FEDERAL AID PROJECT NO. CM/HSI-002S(719)X

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JUNE 15, 2012, THE 2014 CONSTRUCTION STANDARD DETAILS, THE 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS, (AS RELATED TO TRAFFIC STANDARD DETAILS ONLY), THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE AASHTO GUIDE FOR THE PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES 2012, THE AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES 2012, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

	INDEX
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2-3	LEGEND & ABBREVIATIONS
4-5	KEY PLAN & BORINGS
6-7	TYPICAL SECTIONS
8-13	CONSTRUCTION DETAILS
14	CONSTRUCTION BASELINE TIE PLANS
15-18	CONSTRUCTION PLANS
19-22	CURB TIE AND GRADING PLANS
23-31	TRAFFIC SIGNAL PLANS
32-35	TRAFFIC SIGNS & PAVEMENT MARKINGS
36	TRAFFIC SIGN SUMMARY SHEETS
37-41	MASSDOT SIGNAL SHEETS
42-51	TEMPORARY TRAFFIC CONTROL PLANS
52-53	CROSS SECTIONS



### DESIGN DESIGNATION - MASSACHUSETTS AVENUE

DESIGN SPEED	30 MILES/HR
ADT (CURRENT)	24,705
ADT (DESIGN YEAR)	27,295
K	7.8%
D	53.8% EB
T (PEAK HOUR)	1.1%
DHV	2,130
DDHV	1,145

FUNCTIONAL CLASSIFICATION URBAN PRINCIPAL ARTERIAL

### DESIGN DESIGNATION - MYSTIC STREET / PLEASANT STREET

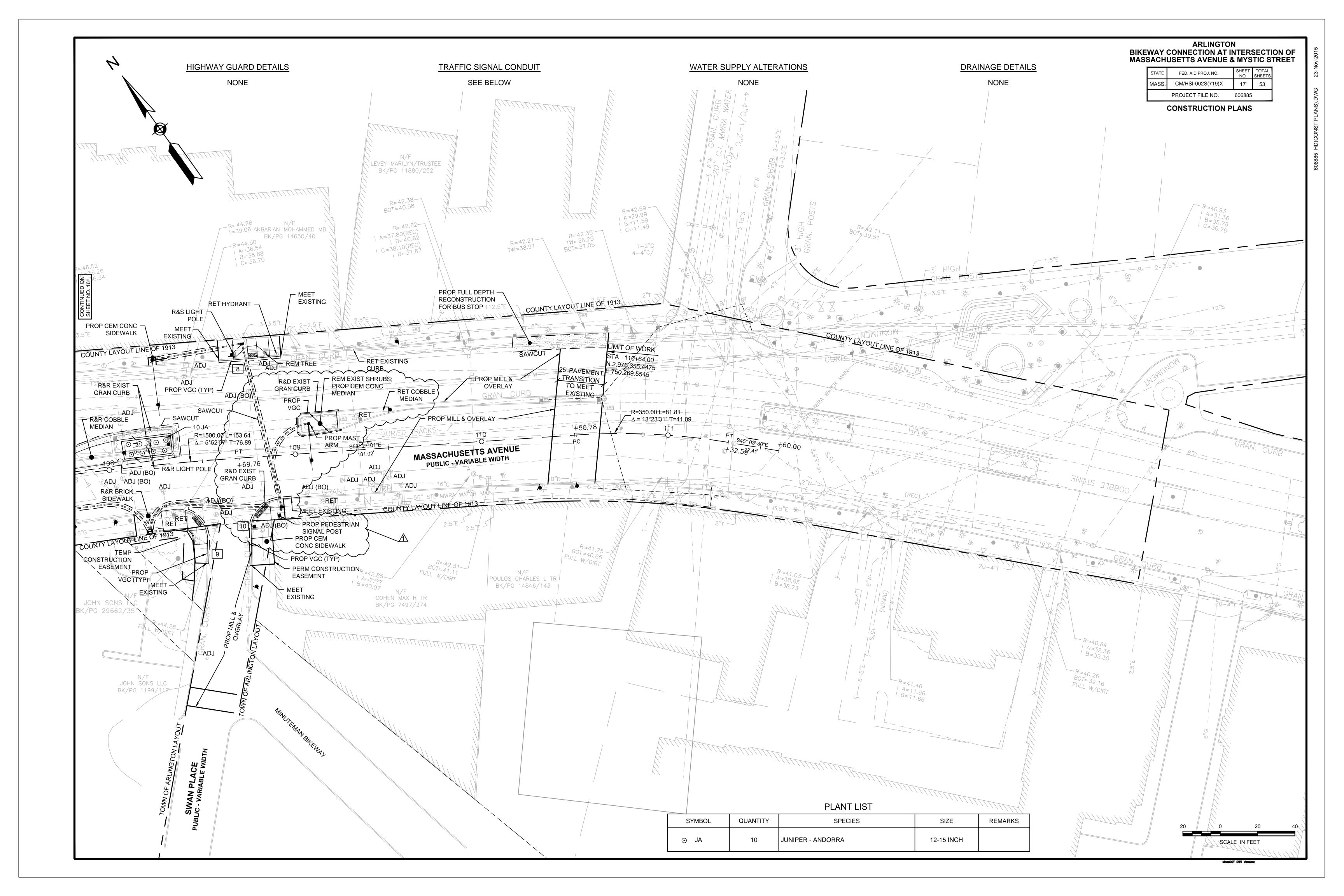
DESIGN SPEED	30 MILES/HR
ADT (CURRENT)	20,285
ADT (DESIGN YEAR)	22,410
K	7.4%
D	51.2% SB
T (PEAK HOUR)	2.2%
DHV	1,670
DDHV	856
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

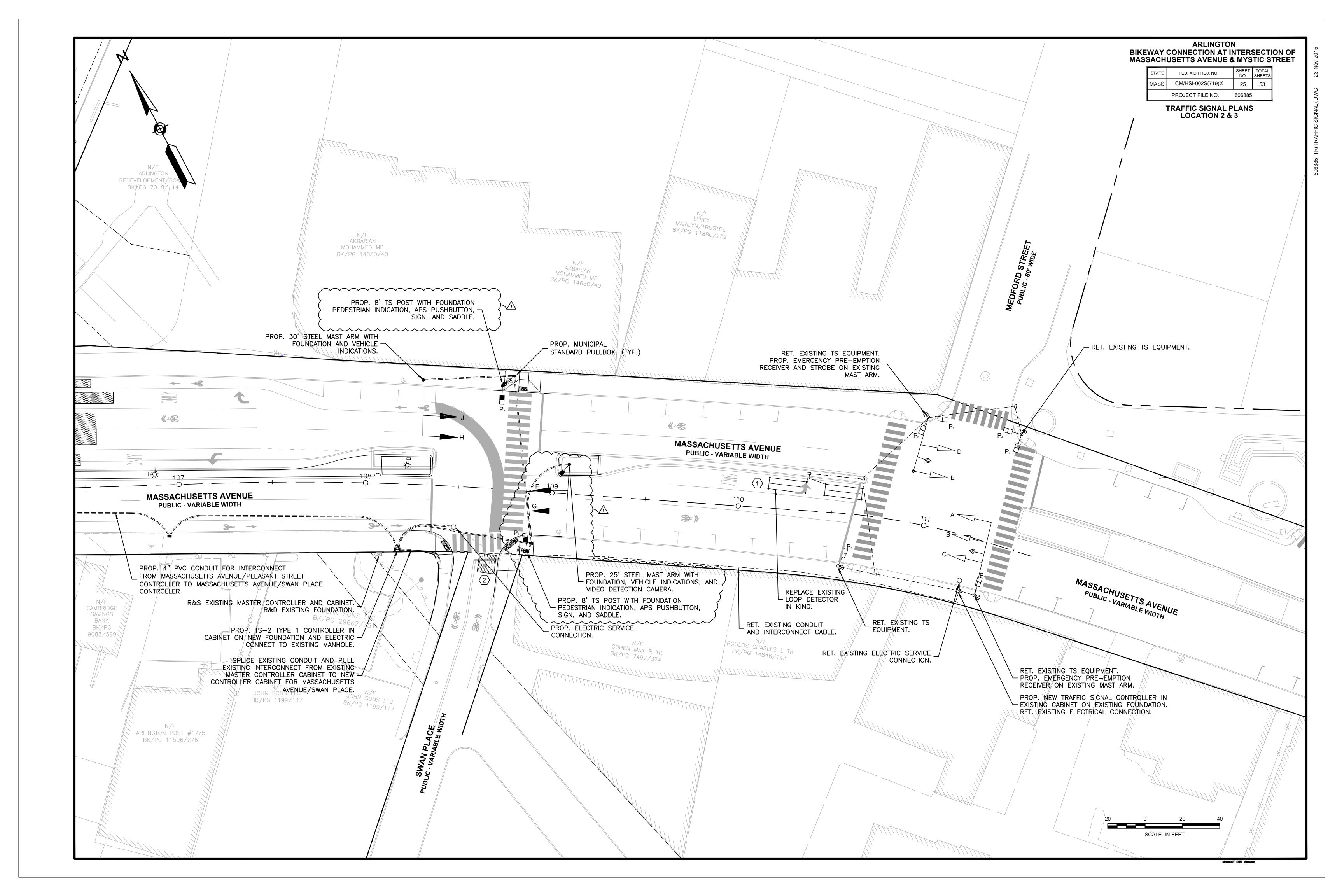
500 0 500 1000 SCALE 1" = 500'

LENGTH OF PROJECT = 1650.00 FEET= 0.312 MILES



	11/16/2015	TRAFFIC SIGNAL UPDATES	1
	DATE	DESCRIPTION	REV#
	M M	Massachusetts Department of Transighway Division	
	REC	COMMENDED FOR APPROVAL	
	c	HIEF ENGINEER	DATE
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION		APPROVED	
APPROVED:			
DIVISION ADMINISTRATOR DATE	HIGHV	VAY ADMINISTRATOR	DATE





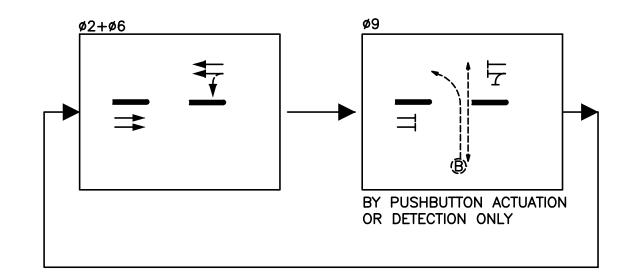
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<b>\</b>	ø2 PHASE	ø6 PHASE	ø9 PHASE		
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Massachusetts Ave.					
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<u>.</u>			<b>6</b>		

		l÷										(B)					
SEQUENCE AND TIMING F	FOR FULL ACTU	ATED CONTROL (CO	ORDINAT	ED)													•
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11				FLASH OPER.
MASSACHUSETTS AVENUE	EB	F,G	OFF	FY	SY	SR	OFF	OFF	OFF	OFF	SR	FR	FR				OFF
MASSACHUSETTS AVENUE	WB	J,H	OFF	OFF	OFF	OFF	OFF	FY	SY	SR	SR	FR	FR				OFF
PEDESTRIAN	N-S	P7-P8	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW				OFF
			-														
			1														
					_	TIMING	IN SE	CONDS						 	 		
MINIMUM GREEN (INITIAL)			70				70										
PASSAGE TIME (VEHICLE)			<u> </u>				_										
MAXIMUM 1			_				_										
MAXIMUM 2			<u> </u>				_										
YELLOW CLEARANCE				3	3			3	3								≿ .
RED CLEARANCE					1				1			4				ERGENCY ONLY	
WALK (W)										10							
PEDESTRIAN CLEARANCE			-									19					EWE
RECALL				M	AX			M	AX			NONE					
MEMORY			1		-LOCK				-LOCK			LOCK					

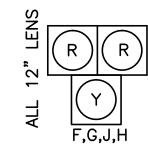
	COORDINATI	ON DATA				COORDINATIO	COORDINATION PHASE TIMING					
	TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.		
TP1	M - F (6AM - 9AM)	120	104	87 (120)	87 (120)	33 (0)						
TP2	M - F (3PM - 7PM)	120	97	87 (120)	87 (120)	33 (0)						
TP3	SAT (11AM - 6PM)	110	89	77 (110)	77 (110)	33 (0)						

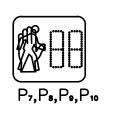
- MASTER CONTROLLER IS AT MASSACHUSETTS AVENUE/MYSTIC STREET.
   COORDINATION SHALL BE AT THE START OF \$\phi 2\&phi6\$.
- 3. COORDINATION SHALL RUN DURING THE TIMES LISTED ABOVE. FREE OPERATION SHALL
- RUN DURING ALL OTHER TIMES.
  4. Ø9 SHALL BE ACTUATED BY PUSHBUTTON OR DETECTION ONLY.
- 5. COORDINATION TIMING WHEN Ø9 IS NOT CALLED IS DENOTED WITH THE PARENTHESES

### PROPOSED PHASING DIAGRAM



### SIGNAL IDENTIFICATION





### NOTES:

- 1. ALL NEW VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL
- BE EQUIPPED WITH TUNNEL VISORS.
- 2. ALL NEW PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
- ALL NEW VEHICLE INDICATIONS SHALL HAVE 5" NON-LOUVERED BACK PLATES WITH REFLECTIVE STRIPS.
- 4. ALL SIGNALS SHALL BE RIGIDLY MOUNTED.

### VIDEO DETECTOR DATA

DETECTOR NUMBER	DETECTION SIZE	ø CALLED	ø EXT.	MODE A=PULSE B=PRES.
2	9'X10'	9	9	В

### **ARLINGTON** BIKEWAY CONNECTION AT INTERSECTION OF MASSACHUSETTS AVENUE & MYSTIC STREET

TATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
ASS.	CM/HSI-002S(719)X	26	53
	PROJECT FILE NO.	606885	

TRAFFIC SIGNAL DATA LOCATION 2

		MAJOR ITEMS REQUIRED						
PAY ITEM	QUANTITY	ITEM						
		TRAFFIC SIGNAL CONTROLLER CABINET & FOUNDATION						
	2	8' SIGNAL POLE, BASE, & FOUNDATION						
	1	25 FT TYPE II, GALV. STEEL MAST ARM ASSEMBLY, BASE & FDN.						
		30 FT TYPE II, GALV. STEEL MAST ARM ASSEMBLY, BASE & FDN.						
	4	3-SECTION, SIGNAL HOUSING (12" L.E.D.)						
	2	PEDESTRIAN HOUSING (16" L.E.D. W/ COUNTDOWN)						
	2	APS PUSH BUTTON, SIGN & SADDLES						
	1	VIDEO DETECTION CAMERA						
815.1	1	VIDEO DETECTION CARD RACK						
<u>8</u>	1	VIDEO DETECTION PROCESSOR						
	4	NON-LOUVERED BACKPLATES WITH 3-INCH REFLECTIVE STRIPS						
	1	ELECTRIC SERVICE CONNECTION — UNDERGROUND						
811.30	2	8" X 23" PULL BOX						
		Plus all necessary duct, cable, labor, miscellaneous						
		material and equipment to complete the installation.						

### PEDESTRIAN HYBRID BEACON & PEDESTRIAN INDICATION SEQUENCE

R R	1. DARK UNTIL ACTIVATED.	1. DON'T WALK.
R R	2. FLASHING YELLOW UPON ACTIVATION.	2. DON'T WALK
R R	3. STEADY YELLOW FOR VEHICLE CLEARANCE.	3. DON'T WALK.
SR SR	4. STEADY RED DURING BUFFER INTERVAL.	4. DON'T WALK.
SR SR	5. STEADY RED DURING PEDESTRIAN WALK INTERVAL.	5. WALK.
FR R R FR	6. ALTERNATING FLASHING RED DURING PEDESTRIAN CLEARANCE INTERVAL.	6. FLASHING DON'T WALK WITH COUNTDOWN.
FR R R FR	7. ALTERNATING FLASHING RED DURING PEDESTRIAN BUFFER INTERVAL.	7. DON'T WALK.
R R	8. DARK UNTIL ACTIVATED AGAIN.	8. DON'T WALK.

MassDOT DWT Version:

